POPULATION TODAY

Vol. 20 No. 7/8 July/August 1992

FEATURES

3 **Multiculturalism Grows, but Segregation Lingers**
New data from 1990 Census

4 **Fertility Drops Slightly in Cameroon**
Modern contraceptives remain scarce

5 **A.I.D. Rethinks Population Priorities**
New approach hopes to bring "significant fertility decline"

6 **Teaching Demography: Strategies that Work with Students of All Ages**

8 **Population and Environment Study Kits**
PRB's teaching tools for elementary, middle school, and high school students

9 **Upcoming Conferences**
Special: Opportunities for PRB teacher training

11 **Textbooks and videos for teaching population issues**

DEPARTMENTS

2 From the editor's desk

2 Speaking graphically

4 Survey report

6 Demographer's page

9 Population update

10 Take a number

12 Spotlight (Nigeria)

Special Features on Teaching Demography

Children dip into population issues, using PRB learning materials (see page 6).

PRB *A publication of the Population Reference Bureau, Inc.*

FROM THE EDITOR'S DESK

Population education is featured in this summer issue of *Population Today*.

The Demographer's Page, our "centerfold" feature (starting on page 6), was written by Kimberly Crews, head of PRB's Population Education Program. It explores some approaches to teaching population issues and demographic concepts at the elementary, high school, and college levels.

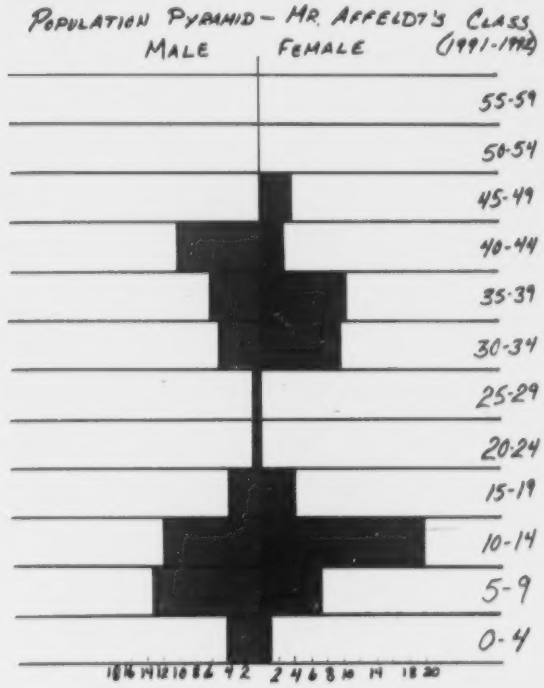
This issue also features a description of PRB's population education activities (page 8), a list of conferences where PRB will present teacher training workshops (page 9), and suggestions for texts and audiovisual teaching materials (page 12). Carl Haub's usual column, Take a Number (page 10), is devoted to *World Population Facts*, a simplified version of PRB's *World Population Data Sheet*, from the *CONNECTIONS* program designed for elementary school use. In Speaking Graphically (below), we illustrate the kind of population graphs children can create.

Today, demographic concepts and population issues are being presented far earlier than the traditional college and graduate school levels. These concepts highlight the human condition and explain the dynamics of human change. They are a remarkable tool to help young people understand an increasingly interdependent world.

With the September issue, *Population Today* will be back to its usual content mix—but with a new look. The September issue will introduce a new design that will make *PT* even more readable and easy to use. We are excited about the new look, and hope you will be too.

—Susan Kalish

SPEAKING GRAPHICALLY



A fourth grade class in Lodi, Wisconsin, displays the results of a census of its households. The overall barbell shape of the population pyramid results from a dearth of relatives in their 20's and a young age cut-off (ages 45-49) in the families of these 10-year-olds.

POPULATION TODAY

VOL. 20, NO. 7/8 July/August 1992

POPULATION TODAY, the newsmonthly of population and demography, is published 11 times a year (a combined issue in July/August) by the Population Reference Bureau, Inc., founded in 1929, a nonprofit organization engaged in the dissemination of objective population information. The views and opinions of POPULATION TODAY's contributors are their own and do not necessarily reflect those of PRB.

Editor: Susan Kalish
Demographic Editor: Carl Haub
Contributing Editors: Sara Adkins-Blanch, Kimberly Crews, Alex de Sherbinin
Consulting Editors: Thomas W. Merrick, Sharon Hershey, Machiko Yanagishita
Director of Publications: Carol J. De Vita
Production Coordinator: Aichin Lim Jones
Production Assistant: Jacqueline H. Guenther
Circulation Director: Jacki Majewski

Editorial and Circulation Offices:
Population Reference Bureau, Inc.
1875 Connecticut Ave., N.W., Suite 520
Washington, DC 20009-5728
Phone: (202) 483-1100; FAX: (202) 328-3937

Reprint Permission: Material from POPULATION TODAY may be reproduced freely, provided that credit is given to "POPULATION TODAY, Population Reference Bureau, Inc." and a copy of the publication in which the material appears is forwarded to PRB.

Back Issues: Back issues of POPULATION TODAY and its predecessor INTERCOM are available in limited quantities from PRB for $2.00 per copy.

Mailing: Printed in Washington, D.C. Mailed nonprofit postage rate in the United States; printed matter surface rate to Canada, Mexico, and to other foreign subscribers.

Address Changes: Send current PRB address label and new address; please allow eight weeks for change.

©1992 by the Population Reference Bureau, Inc.

ISSN 0749-2448

PRB MEMBERSHIP

In addition to POPULATION TODAY, PRB members receive annually four in-depth POPULATION BULLETINS, and two wallcharts (the WORLD and UNITED STATES POPULATION DATA SHEETS).

	U.S.	Outside the U.S.
Individual	$45	$56
Educator*	30	38
Student/Senior*	25	28
Library/nonprofit organizations	55	68
Other organizations	200	250

* Educators, students, and seniors should send supporting documentation

Recycled Paper

Multiculturalism Grows, but Segregation Lingers

The 1990 Census produced the most detailed data on race and ethnicity in decades, and got it out much faster than earlier censuses. Two major messages emerge. First, all evidence confirms the growing trend toward multiculturalism in the United States. Second, residential segregation of U.S. blacks has remained basically unchanged for two decades.

Early figures on the population by race and Hispanic origin reveal a growing U.S. diversity: the number of Asian/Pacific Islanders doubled, growing from 3.5 million to 7.3 million since 1980. The black population increased 13 percent, from 26.5 million to 30 million. People identifying themselves as American Indian, Eskimo, or Aleut increased from 1.4 million to 1.9 million. The number of whites (including Hispanic origin) also grew, but at the slower rate of about 10 percent, from 188.4 million to 199.7 million. In addition, people of Hispanic origin grew dramatically from 14.6 million to 22.4 million.

In May, the bureau released information from the "long form" of the 1990 Census (which is administered to approximately one out of every six households). The long form contains information on social characteristics, including language group, ancestry, foreign birth, and date of arrival for immigrants. The census found that about one out of eight people in the United States (31 million people) speak a language other than English at home. Of these, 17 million speak Spanish, 4 million one of the Asian languages. Almost half of those who speak another language at home reported that they don't speak English "very well."

The number of foreign born residents is at an all time high: 20 million, which is just under 8 percent of the population. Almost half of these are recent arrivals, who entered the United States since 1980.

These immigration-fueled trends almost certainly are continuing, since the Immigration Reform Act of 1990 further liberalized immigration.

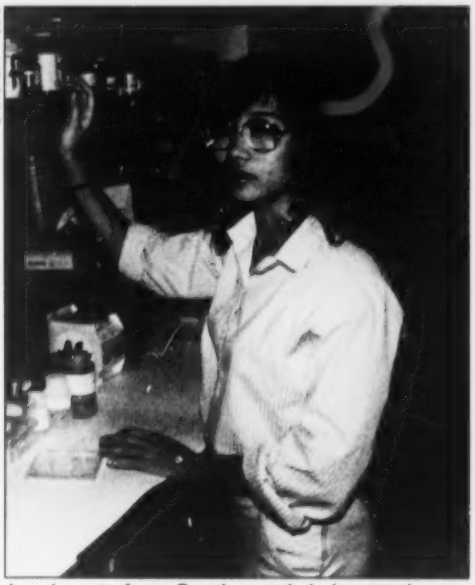
The May figures also showed ancestry in terms of ethnic origin. Most commonly reported were German (58 million), Irish (39 million), English (32 million), Italian (15 million), and United States or American (13 million).

"Heinz 57" or "NOYB"

All these figures provide different perspectives on the emergent multicultural trend. They also illustrate the hazards of submitting the untidy phenomenon of human ethnicity to any neat, logical classification system. Concepts such as race, ethnicity, national origin, ancestry, and native tongue often overlap. For example, "chicanos" from New Mexico, "latinos" from California, immigrants from Spain, black Cubans, Pacific Islanders from the Philippines, and their descendants might all designate themselves as "Hispanic origin."

In addition, many Americans seem to identify with a different set of ancestors at different times. Between 1980 and 1990, for example, the tendency of persons to report "English" ancestry declined, but rose for "German" ancestry, as Nampeo McKenney of the Census Bureau reported to a joint Canada-United States conference on the measurement of ethnicity held in Ottawa this April. A substantial portion of the rapid rise in the American Indian population over the past few decades (38 percent between 1980 and 1990) is due to new decisions to identify oneself as such. A greater willingness to designate oneself as belonging to a certain race, ethnicity, or ancestry may reflect consciousness raising among the group, an upsurge in media attention to that group, adoption of affirmative action policies by government or industry, or simply the order in which examples are listed in the questionnaire. ("German" led the list of examples in 1990.)

The Census Bureau uses a self-identification approach to race and ethnicity. Susan Lapham reported to the Ottawa conference that the bureau used 630 different computer codes to accommodate the many different self-characterizations of ethnicity that people wrote in, beyond categories printed on census forms.



UNHCR/P. Théard

Immigrants from Southeast Asia boosted multiculturalism in the 1980s.

Sometimes census categories confuse, or even annoy respondents. Answers received to the questions on race, Hispanic origin, and ancestry include "mixed," "a little of everything," "a fine blend," "Heinz 57," "exotic hybrid," "adopted," "child of God," "None Of Your Business," or, more briefly, "NOYB."

Hispanics have particular difficulties answering the race question, since many do not personally identify with any of the racial designations (white, black, Asian/Pacific Islander, or American Indian/Eskimo/Aleut) and do not automatically make the distinction between race versus the ethnicity of Hispanic origin. The bureau estimates that in 1990, over 40 percent of Hispanics thus checked off "other race." This apparent failure of the current racial self-definition scheme made it appear that "other race" outnumbered Asians

Continued on next page

Multiculturalism,
Continued from previous page

in California, Texas, New York, Florida, and several other states.

The Census Bureau collects information on race to fulfill legislative mandates, federal program requirements, and to satisfy the information needs of researchers, marketers, or the press. The nature of immigration flows, political pressure from emerging groups, and the costs and benefits of collecting detailed information enter into these decisions. The Office of Management and Budget has the final say. The question on Hispanic origin was first included on the long form in 1970 and asked of every household in 1980. "Vietnamese" and "Asian Indian" were added as detailed Asian categories in 1980. The bureau has received considerable pressure to add a "mixed race" category to the 2000 Census to indicate the offspring of biracial parentage and is considering this issue.

The categories used in government questionnaires can forge new identities. This seems to have happened with government school attendance surveys that collect racial and ethnic data. Filling out these forms taught millions of people of Cuban, Mexican, Salvadoran, and other national origins to describe their children as "Hispanic." Summary categories used by the Census Bureau for reporting ancestries may also help create ethnic identity, for example "Arab" (not Egyptian or Palestinian) or "sub-Saharan African" (which may require more geographical sophistication than many of the public can muster).

Persistence of Segregation

Analyses on racial segregation of housing—not performed on the 1980 Census until mid-decade—are already available.

"One main fact stands out," Roderick Harrison of the Census Bureau told *Population Today*. "The rate of change is such that, if you thought segregation was a problem in the 1970s, the numbers would say that it still is. The data show declines in most measures for blacks in residential segregation, but the declines are marginal."

As found in earlier censuses, "black segregation is the highest, and is of a different order of magnitude. All changes over the past 20 years barely put a dent in those big differences," Harrison also noted.

This analysis provides data for 254 U.S. metropolitan areas in three size groupings, and for 15 of the most segregated metro areas. The analysis is a sophisticated one, incorporating 19 measures (grouped into five dimensions) compiled by sociologists Douglas Massey and Nancy Denton in a 1988 study of segregation in 60 U.S. cities. The dimensions include evenness (distribution of two populations across geographic areas being compared), concentration, exposure (likelihood of a member of one group encountering a member of another group), clustering (compactness of residential enclaves of a concentrated minority group), and centralization within an urban area.

According to Harrison, blacks are the most segregated ethnic group for all measures (with the possible exception of clustering for American Indians). Next, on measures of evenness, exposure, and clustering, are Hispanics. Asians are more segregated than American Indians, except for clustering.

It is unclear, said Harrison, how much of today's segregated housing patterns is caused by exclusion or discrimination and how much by personal choice or preference on the part of minority group members. Still, a recent study conducted by the Urban Institute for the Department of Housing and Urban Development found racial "steering" and other informal discriminatory mechanisms at work in the real estate market.

—Susan Kalish

Segregation data for 254 U.S. metro areas is available on disk, as is a copy of the paper, *Racial and Ethnic Residential Segregation in 1990*, by Roderick Harrison and Daniel H. Weinberg. No charge. Contact Roderick Harrison, U.S. Census Bureau, Washington, DC 20233, (301) 763-2607.

See also *The Housing Discrimination Study: Synthesis*, by Margery A. Turner, Michael Fix, and Raymond Struyk, The Urban Institute, August 1991. Contact: The Urban Institute, P.O. Box 7273, Department C, Washington, DC 20044. Price: $9.00 prepaid.

SURVEY REPORT
Cameroon

Fertility has declined slightly in the Middle African country of Cameroon since 1978, according to a preliminary report from the nationally representative 1991 Demographic and Health Survey. The total fertility rate (TFR, or average lifetime births per woman) was 5.9 children, showing a downward trend from the TFR of 6.4 in 1978. The lowest TFR (4.5 births) was observed in the cities of Malabo and Yaounde; the highest (6.4 births) in rural areas.

More than seven in ten women said they knew of at least one method of family planning. Among modern methods, female sterilization is the most widely known (53 percent), followed by the pill (49 percent) and the condom (44 percent). Among traditional methods, periodic abstinence is the best known (45 percent). Only one woman in two claimed to know a source for modern methods, however, and only 4 percent were currently using one. About three-fourths of husbands had heard of at least one contraceptive method, and about half (48 percent) have ever used a contraceptive method. Twenty percent reported they currently use a method.

Almost three-fourths (73 percent) of women in union declared they would like to have another child, 12 percent wanted no more, and 5 percent were undecided.

The great majority (70 percent) of children born in the last five years had mothers who had a prenatal consultation with a health professional, although only 14 percent of these professionals were doctors. Infant mortality has declined substantially within the past 15 years, but still remains relatively high at about 66 infant deaths per 1,000 live births.

—Sara Adkins-Blanch

The *Cameroon Demographic and Health Survey 1991, Preliminary Report*, was carried out by the Department of the Second Population Census of the Ministry of Plan and Development, with the technical assistance of IRD/MACRO International, Inc, Columbia, MD. It was released November 1991.

A.I.D. Rethinks Population Priorities

The U.S. Agency for International Development (A.I.D.) is currently exploring a new set of priorities for its population program. The proposed strategy would be designed to emphasize "demographically significant" countries—those with the largest populations and judged to have the greatest family planning needs. The priority countries (currently 17 in number) would include such giants as India, Indonesia, Brazil, Pakistan, Bangladesh, and Nigeria (see chart).

The agency generally spends substantially less per capita in large countries than in small ones. The strategic concentration of resources is needed, the plan's advocates say.

"A.I.D. has been an important player in international population assistance for the past 26 years," said a recent agency report. "Over that period, interest in, and demand for, family planning have grown tremendously. A.I.D.'s financial and staff resources have not grown commensurately, resulting in the need for a new, more rational resource allocation strategy."

A hoped-for increase in population funding of $50 million in FY1992 was to launch new initiatives for priority countries, along with bridge funding for existing programs in smaller countries. The agency also plans to continue bilateral population programs in about 26 nonpriority countries.

On Hold

Currently, however, implementation is on hold. Congress did not pass the anticipated foreign aid appropriations for FY1992, but only provided a continuing resolution, so that funding for the A.I.D. Office of Population remains at the FY1991 level of $208 million. Hope is dwindling that Congress will do more than pass another continuing resolution, also at FY1991 levels, during this session. In addition, A.I.D. has reportedly not yet reached agreement on all aspects of the plan.

"The strategy is still under discussion," said Bill Johnson, who, as head of the new Regional Coordination Division of A.I.D.'s Office of Population, would be responsible for the plan. "But ultimately some strategy which gives more emphasis to priority countries will probably emerge." In the meantime, some elements in line with the strategy, such as new programs in Uttar Pradesh, India, are proceeding.

Several other large countries would enter the high-priority list if they were to become eligible for A.I.D. assistance, including Myanmar, Vietnam, and Russia. Zaire is on the list, although no programs could be implemented until the current political crisis is resolved.

A.I.D.'s Proposed Priority Countries

	Population estimate mid-1992 (millions)	Family planning need measure*	TFR**	Percent of married women using contraception by method (any/modern)
Africa				
Ethiopia	54.3	3	7.5	4/3
Kenya	26.2	2	6.7	27/18
Nigeria	90.1	5	6.5	6/4
Tanzania	27.4	1	7.1	—
Zaire	37.9	2	6.1	—
Asia				
Bangladesh	111.4	6	4.9	31/24
India	882.6	30	3.9	49/43
Indonesia	184.5	5	3.0	50/47
Pakistan	121.7	7	6.1	12/9
Philippines	63.7	2	4.1	36/22
Near East				
Egypt	55.7	2	4.4	38/35
Morocco	26.2	1	4.2	36/29
Turkey	59.2	2	3.6	63/31
Latin America				
Brazil	150.8	3	3.1	66/57
Colombia	34.3	1	2.9	66/55
Mexico	87.7	3	3.8	53/45
Peru	22.5	1	4.0	46/23

* Percentage of aggregate family planning need among 95 countries (based on estimates of the number of women who want to space or stop having births, number of high-risk births, and number of high-parity births).
**Average number of children born to a woman during her lifetime.
Source: 1992 PRB World Population Data Sheet and A.I.D.

Making the List

Such a strategy "has a high probability of resulting in significant fertility decline," according to A.I.D.'s report.

A.I.D. planners first dubbed the approach the Bigger Impact Globally (or BIG) strategy. Because of the enormous size of the nations involved, it soon gained the nickname of the "BIG *country* strategy." However, a family planning need scale—based on the level of unmet need for family planning, the number of high-risk births, and the number of high-parity births (four children or more)—played a major role in determining priorities.

Other countries may be added in the future. In over 50 countries, however, current arrangements for population assistance could be phased out. Some observers fear the new approach could jeapordize family planning progress in some small African countries with very high rates of population growth, where A.I.D. has been active in the past.

—*Susan Kalish*

For more information, see *An Analysis of A.I.D.'s Population Strategy for the 1990s*, by Duff G. Gillespie et al., Office of Population, U.S. Agency for International Development, working paper presented at the 1992 Annual Meeting of the Population Association of America.

DEMOGRAPHER'S PAGE

Teaching Demography: Strategies that Work with Students of All Ages

by Kimberly Crews

A 13-year-old boy stands at the front of the class, dipping blue-tinted water with a plastic measuring cup from a nearby bucket into a partially filled aquarium. A girl stands next to him, dipping water out of the aquarium with a one-third cup measure into the bucket labeled "the Great Beyond."

The aquarium—as all the class can see—is rather quickly filling up.

Pinned to the boy's t-shirt is a sign: "The Stork;" the girl's sign reads "The Grim Reaper." The teacher drives the lesson home to the attentive class: Just as the aquarium is filling up, so is world population growing—since the world birth rate (26 per 1,000) is about three times the death rate (9 per 1,000).

When are students old enough to learn about demography and population issues? High school? Middle school? Elementary? The population education program at the Population Reference Bureau has been working with elementary and secondary teachers for 20 years, developing learning materials on population and related issues. What we are finding is that the demographic perspective can be successfully introduced to middle-school students, or even younger children. The key is appropriate, well-designed lessons and materials that present the information concretely.

Elementary Students

Students can begin to use demographic concepts to help make sense of the world while still in elementary school. Third or fourth graders are not too young to learn that countries and regions differ in terms of population size, distribution, and structure—or that such differences can be quantified. They can also begin to gain some sense of the nature of human population growth. Incorporating population studies into elementary curricula gives students information about world issues and new conceptual tools, while reinforcing skills they are already learning in core subjects.

In math classes in grades four to six, students learn to work with place values of millions and billions, practice estimation, become comfortable with reading and constructing graphs, learn to use percentages, and practice basic computation. In social studies, students learn world geography, examine human characteristics of places, draw and analyze maps and graphs, and examine environmental problems. These, as well as other skills developed in science and social studies, lend themselves to the study of world population.

One learning tool that elementary teachers find useful is *Connections II World Population Facts* (see Take a Number, page 10), which is part of the PRB elementary teaching kit. Designed for elementary level students, this fact sheet is a notebook-sized, simplified version of the fold-out *PRB World Population Data Sheet*. (The *World Population Data Sheet* is a useful reference for older students, but is too complicated for most students in elementary grades.) *World Population Facts* lists only 20 countries and regions, simplifies the column headings, writes out all figures completely, and excludes any rates except percentages.

Elementary students can use this reference to compare the United States with other parts of the world, and to compare the sizes of the world, country, state, and local populations. Students practice place value by transferring information from the *World Population Facts* sheet to a worksheet. They practice reading and writing numbers in millions and billions, as well as become familiar with other demographic concepts. Data and concepts form a knowledge base on which to build a more thorough understanding of the world.

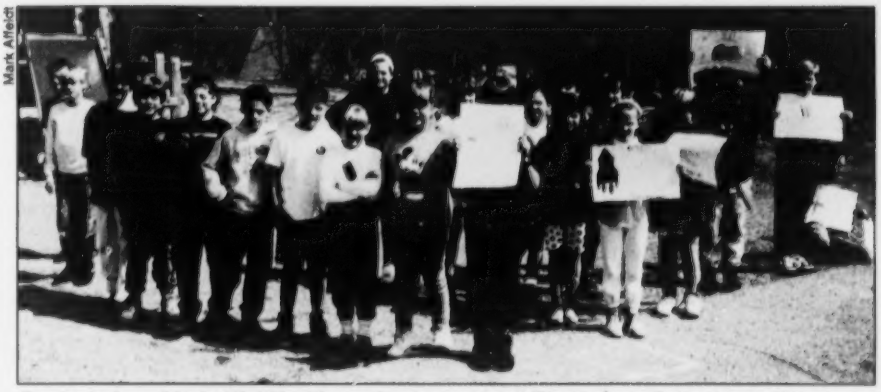
In another lesson, the class creates a statistical portrait of a child in a selected country. Students can work individually to develop a creative profile of an imaginary child in another country—a challenging writing exercise.

Example of a computer-generated map created by high school students.

Kimberly Crews is a Demographer and Director of the Population Education Program at the Population Reference Bureau

Population trends can also be taught through the use of maps and graphics. A dramatic way to show human population growth through time is by constructing a human graph (see photo). Each student represents 500 million people. The row of 10 students on the left represents population in the year 1992 (10 X 500 million = 5 billion); the student sitting down on the far right represents the population in the year 1 AD at 250 million. (Not shown in the picture is the shoe that represents the population of 4 million in 10,000 B.C.) The student at the head of each row holds up a sign giving the date and population size, with a symbol to represent the historical period.

The power of the population pyramid—to make readily apparent the overall age and sex distribution of an entire population—can be brought to life for elementary students by taking a census of their own families. (See Speaking Graphically, page 2.)


Mark Affeldt

Students from Mark Affeldt's 4th grade class at Lodi Elementary School in Lodi, Wisconsin, create a human graph showing the whole history of population growth.

Secondary Students

Teens can work with fairly complex data, employ analytic techniques and advanced computation skills. They can conceptualize rates of birth, death, natural increase, and other demographic measures. World population can augment many subject areas—environmental science, biology, math, geography, history, global issues—and is particularly appropriate for team teaching.

Secondary students can use the PRB *World Population Data Sheet* to access summary demographic measures for 195 countries—but only with some preparation. Teachers need to take the time to guide students through the layout, column headings, and definitions of the variables, lest students otherwise feel overwhelmed by the quantity of data presented. One way to begin is to ask questions of the class and have them search for the answers with a partner. Once the students become comfortable with the process, they will begin looking up information on their own. Young people are usually intrigued by the variations in the data.

One rapport-building activity for this group is, "Connecting Population Clues," from the *CONNECTIONS* teaching kit for secondary students. This activity guides students to use the *World Population Data Sheet* to explore a country. It helps them understand the major demographic rates and variables, compare countries and regions, and consider the different environments in which people live.

Secondary students use the same data presentation tools—maps, graphs, speeches, prose—as those introduced in the elementary grades. However, teens can do much more in terms of application, analysis, and evaluation. Secondary students can gather and manipulate data, and present it in hand-drawn and computer-generated maps and graphs, and in oral and written reports.

Tenth grade students from Martha Sharma's class at the National Cathedral School in Washington, D.C. used MacAtlas software to prepare a choropleth map of Africa (pictured on facing page) highlighting an indicator chosen from the *World Environment Data Sheet*. They then analyzed the distribution of the indicator, compared it among six countries outside of Africa, and discussed the significance for Africa's future.

While middle and high school students can understand and construct regular population pyramids, the use of "modified" four-tier pyramids is a quick and easy way for each student in the class to draw and analyze the population structure of a different country. The pyramids can be constructed in a few minutes and intercountry comparisons can be made in one class period. Students can discuss the factors that determine the shape of a given pyramid, evaluate the implied prospects for future population growth, and identify clues as to the country's level of economic development.

College Students

Although population concepts can be introduced at the elementary and secondary level, most students in fact arrive at college with little or no background on these matters. Their first exposure is likely to be an introductory geography or sociology course. Many introductory geography instructors include the *PRB World Population Data Sheet* among their required course materials. Often, they do an introductory activity with the students and then encourage them to use it for reference.

Students might be asked to locate countries with the highest and lowest rates, or to rank the ten largest countries in order of current and projected popula-

Continued on next page

Demographer's Page
Continued from previous page

tion size. More thoughtful activities might ask students to analyze the projections, discuss data collection processes, or speculate about future population trends. Examples of such activities may be found in PRB's *World Population: Facts in Focus*, a workbook based on the data sheet.

The *World Population Data Sheet* can be used to encourage critical thinking about the terms "developed" and "developing." Says Vernon Domingo of Bridgewater State College, Massachusetts: "I divide the class up into four groups (Africa, Asia, Latin America, and Europe). They meet and have to select a country in their region which is most 'typical' (not too clearly defined). This results in lots of shifting of mental maps. Then they have to complete the worksheet for their country. Finally as a take-home activity, they have to study the data to explain which country is least 'typical.'"

Students of geography instructor Gail Hobbs at Pierce Junior College in California use the data sheet to complete two hand-drawn choropleth maps and a computer-generated map. While time consuming, these projects provide valuable experience in compiling data and interpreting data maps. It also aids students in reviewing (or learning) where countries are located.

Demography provides valuable conceptual tools that all students need to understand their world. Most students can benefit from its insights if the subject is presented at an appropriate level. The key is linking the powerful abstractions of demography with the richness of concrete reality. The younger the age group, the more the approach needs to be personalized and local.

Sources:
1. Geographic Education National Implementation Project, K-6 *Geography: Themes, Key Ideas, and Learning Opportunities* (Washington, DC: GENIP, 1987).
2. Population Reference Bureau, *Making Connections II: Linking Population and Environment* (Washington, DC: PRB, 1992) (elementary students).
3. Population Reference Bureau, *CONNECTIONS: Linking Population and the Environment* (Washington, DC: PRB, 1991) (secondary and college students).
4. Population Reference Bureau, *World Population: Facts in Focus* (Washington, DC: PRB, 1988) (secondary and college students).

Population and Environment Study Kits

Since 1972, PRB has been active in developing classroom materials and training teachers to increase the level and quality of instruction about world population particularly in the secondary classroom. In 1991, PRB published a secondary-level teaching kit, *CONNECTIONS: Linking Population and Environment*. Although developed for teachers in grades 7-12, the versatile materials have been used by instructors from kindergarten to college levels.

The *CONNECTIONS* project included teacher-training workshops, held from Alaska to Florida. In these one-half to two-day workshops, teachers learned the basics of population dynamics, analyzed the relationship between population and environment, examined global connections, participated in classroom activities, and took home a wealth of resource and classroom materials (see page 9 for upcoming workshops).

Teachers embraced the *CONNECTIONS* materials and requested additional materials for elementary teachers, workshops specifically geared to high school economics teachers, and dissemination to pre-service teachers. PRB responded by developing the two-year *CONNECTIONS II* project, which expands the scope of *CONNECTIONS*. The three new target groups are:

- Elementary teachers
- High school economics teachers
- Instructors of social studies methodology courses and pre-service teachers.

The materials on population and environment for elementary teachers will be ready for distribution in fall 1992. *Making CONNECTIONS II: Linking Population and the Environment* contains 26 lessons on world population growth, and population-environment interaction in Africa, Asia, and Latin America. The kit will contain a one-page, greatly simplified version of PRB's *World Population Data Sheet* (shown on page 10) and 8 1/2 x 11 inch color photos. Teaching kits will be distributed in future workshops or ordered from PRB.

With the World Bank, PRB will develop a workshop series on Global Resource Management and Sustainable Development for high school economics teachers. The first workshops will be held at national meetings in the fall of 1992 and in Maryland, Illinois, and Indiana in 1993. The series will be expanded in the fall of 1993 and in 1994. Workshop participants will receive an instructional unit on Global Resource Management and Sustainable Development, as well as resource materials from PRB and the World Bank.

CONNECTIONS materials will be made available to pre-service teachers in at least five training workshops for instructors of teaching methods courses (and their students) between 1992 and 1994.

—Kimberly Crews

For more information about PRB's education program, upcoming workshops, or publications, please contact Kimberly Crews, Director, Population Education Program, at the Population Reference Bureau, 1875 Connecticut Avenue, N.W., Washington, DC 20009-5728, 202-483-1100.

ADDENDA

CALVIN AND HOBBES BILL WATTERSON

YOU HAVE A QUESTION, CALVIN?
YES! WHAT ASSURANCE DO I HAVE THAT THIS EDUCATION IS ADEQUATELY PREPARING ME FOR THE 21ST CENTURY?
AM I GETTING THE SKILLS I'LL NEED TO EFFECTIVELY COMPETE IN A TOUGH, GLOBAL ECONOMY? I WANT A HIGH-PAYING JOB WHEN I GET OUT OF HERE! I WANT OPPORTUNITY!
IN THAT CASE, YOUNG MAN, I SUGGEST YOU START WORKING HARDER, WHAT YOU GET OUT OF SCHOOL DEPENDS ON WHAT YOU PUT INTO IT.
OH.
THEN FORGET IT.

Calvin and Hobbes © 1992 Watterson, distributed by Universal Press Syndicate. Reprinted with permission. All rights reserved.

Upcoming Conferences

Teacher Training Workshops will be presented by PRB staff at the following conferences in the fall of 1992.

- The **National Council for Geographic Education** annual meeting, September 23-26 in Santo Domingo, Dominican Republic. This year's theme is "Exploration, Discovery and Impact." PRB will lead two workshops: "Resource Management and Sustainable Economic Development" for high school geography and economics instructors; and "Making Connections: Methods and Materials for Teaching About Population and the Environment" for elementary teachers.

  Contact: NCGE Central Office, 16A Leonard Hall, Indiana University of Pennsylvania, Indiana, PA 15705. Phone: (415) 357-6290.

- St. Petersburg, Florida will host the **Joint Council for Economic Education/NAEE** annual meeting, October 4-7. Come to the "Ideas and Innovation" session on Tuesday October 6. The session will provide participants an opportunity to learn about "Resource Management and Sustainable Economic Development" a joint project of PRB and The World Bank.

  Contact: Pamela Merritt, Joint Council on Economics Education, 432 Park Avenue South, New York, NY 10016. Phone (212) 685-5499 ext. 637.

- Fort Worth, Texas will be the meeting site of the **National Science Teachers Association's Southwestern Area Conference** as well as **Texas' 1992 Conference for the Advancement of Science Teaching**, October 15-17. PRB will lead a one-hour workshop, "Making Connections: Teaching About Population and Environment," on October 15 at 1:00 pm.

  Contact: NSTA 1992 Area Conventions, 1742 Connecticut Ave. NW, Washington, DC 20009-1171, Attn: T. Brent. Phone (202) 328-5800

- "Diversity: An Imperative for Survival" is the theme of the 1992 convention of the **National Association for Biology Teachers** to be held November 11-15 in Denver. PRB will lead a 75 minute workshop on Population and Environment.

  Contact: Wuanita Craven Ngo, Convention Coordinator, NABT, 11250 Roger Bacon Drive, #19, Reston, Virginia 22090. Phone (703) 471-1134.

- The **North American Social Studies Conference** will be held in Detroit, Michigan, November 20-23, 1992. The theme of the conference—the 72nd annual meeting of the National Council for the Social Studies—is "The Contemporary Relevance of 1492." PRB and the World Bank will present a session, "Resource Management and Sustainable Economic Development." PRB will also present a two-hour workshop, "Keeping Social Studies Fresh: Innovative Methods for Teaching Global Issues to Tomorrow's Instructors and Leaders."

  Contact: National Council for Social Studies, 3501 Newark Street, NW, Washington, D.C. 20016. Phone (202) 966-7840.

Contact Kimberly Crews at PRB for more information about PRB participation and opportunities to take part in CONNECTIONS training.

New Workbook: PRB's World Population Data Sheet

PRB's popular *World Population Data Sheet Workbook* is being updated and will include the 1992 World Population Data Sheet in 8 1/2 x 11 inch format. The workbook activities, tested by teachers, contain scanning, mapping, and data analysis exercises appropriate for use in middle school through college level courses. Detailed data for all the republics of the former Soviet Union will heighten student awareness of world geography. The new edition of this 20-page kit will be available in September 1992.

Price: $4.00 each (bulk copies of 2 or more, $3.00 each) plus a postage and handling fee of $1.00 or 4 percent of total order (whichever is greater). Orders less than $50.00 must be prepaid. Make checks payable to PRB. Order from: PRB Circulation Department, P.O. Box 96152, Washington, DC 20009-6152. For credit card orders, call 1-800-877-9881.

POPULATION UPDATE

Estimated United States Population:

As of April 1, 1992	254,710,000
As of April 1, 1991	251,992,000

The above estimates, based on the 1990 Census, include armed forces overseas and are from U.S. Bureau of the Census *Current Population Reports*, P-25, no. 1086.

Estimated World Population:

As of August 1992	5,428,000,000
Annual growth	91,000,000

Extrapolated from the mid-1992 population on PRB's *1992 World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: January 1992

	12 Months ending with January					
	Number		Rate			
	1992	1991	1992	1991	1990	1989
Live births	4,121,000	4,174,000	16.2	16.6	16.3	15.9
Fertility rate	—	—	69.8	71.0	69.1	67.4
Deaths	2,178,000	2,147,000	8.6	8.5	8.7	8.8
Infant deaths	36,300	37,800	8.9	9.0	9.7	9.9
Natural increase	1,943,000	2,027,000	7.6	8.1	7.6	7.1
Marriages	2,354,000	2,446,000	9.3	9.7	9.7	9.7
Divorces	1,188,000	1,179,000	4.7	4.7	4.7	4.8

Note. Fertility rate is given per 1,000 women ages 15-44; infant deaths per 1,000 live births; other rates per 1,000 population.
Source. National Center for Health Statistics, *Monthly Vital Statistics Report*, vol. 41, no. 1 (1992).

TAKE A NUMBER

CONNECTIONS II: WORLD POPULATION FACTS

	Past Population 1950	Current Population 1992	Future Population 2025 (projection)	No. of Children Per Family	Percent Urban[1]	No. of Children Out of 100 Born Who Die Before Age 5	Percent of Population Under Age 15	Percent of Population 65 and Older	Enough Food Daily?[2]	Wealth (per person in 1990)[3]
WORLD	**2,516,443,000**	**5,420,391,000**	**8,545,297,000**	**3**	**43**	**11**	**33**	**6**	—	**$ 3,790**
AFRICA	**221,984,000**	**654,218,000**	**1,539,583,000**	**6**	**30**	**15**	**45**	**3**	—	**630**
Egypt	20,330,000	55,680,000	103,115,000	4	45	11	41	4	Yes+	600
Kenya	6,265,000	26,164,000	62,275,000	7	22	9	49	2	No	370
Sahel Region	**16,502,000**	**44,028,000**	**109,957,000**	**7**	**25**	—	**46**	**3**	—	**375**
Burkina Faso	3,654,000	9,567,000	26,006,000	7	18	19	48	4	No	330
Mali	3,520,000	8,538,000	21,665,000	7	22	19	47	4	No	270
ASIA	**1,377,259,000**	**3,207,402,000**	**4,997,621,000**	**3**	**31**	**9**	**33**	**5**	—	**1,680**
Bangladesh	41,783,000	111,445,000	221,625,000	5	14	18	44	3	No	200
China	554,760,000	1,165,771,000	1,590,783,000	2	26	4	28	6	Yes	370
India	357,561,000	882,575,000	1,383,115,000	4	26	13	36	4	No	350
LATIN AMERICA	**165,880,000**	**452,784,000**	**728,769,000**	**3**	**70**	**8**	**36**	**5**	—	**2,170**
Brazil	53,444,000	150,794,000	237,172,000	3	74	9	35	5	Yes+	2,680
Mexico	28,012,000	87,715,000	143,287,000	4	71	6	38	4	Yes+	2,490
Peru	7,632,000	22,454,000	37,350,000	4	70	11	39	4	No	1,160
NORTH AMERICA	**166,075,000**	**283,046,000**	**362,647,000**	**2**	**75**	**<1**	**21**	**12**	—	**21,580**
United States	151,326,000	255,570,000	327,489,000	2	75	<1	22	13	Yes+	21,700
EUROPE*	—	**511,040,000**	**515,862,000**	**2**	**75**	**<1**	**20**	**14**	—	**12,990**
Germany	68,376,000	80,556,000	73,701,000	1	90	<1	16	15	Yes+	16,200
AUSTRALIA	**8,219,000**	**17,782,000**	**23,900,000**	**2**	**85**	**<1**	**22**	**11**	**Yes+**	**17,080**

* Includes newly independent Baltic states. — Data not available.

[1]**Percent Urban**= Percent of population living in areas called urban by that country.

[2]**Enough Food Daily**= Based on the per capita calorie supply. Yes means that most people get about the number of calories necessary to sustain a person at normal levels of activity and health. No means that most people do not get enough calories daily. Yes+ means that they get more than enough.

[3]**Wealth**= The gross national product (GNP) per capita for 1990.

Source: Population Reference Bureau, Inc.

RESOURCES

For this special issue of Population Today, *Kimberly Crews, director of PRB's Population Education Program, has compiled this listing of books and video tapes for teaching demography and population issues.*

Texts

Our Endangered Planet: Population Growth, by Suzanne Winckler and Mary M. Rodgers. Minneapolis: Lerner Publications Company, 1991. 64 pages. $15.95 hardbound. ISBN: 0-8225-2502-X.

Colorful photographs fill the pages of this balanced, well-conceived text on population growth written for upper-elementary to middle school students. Topics covered include the history of population growth, the mathematics of natural increase, the impact of human activities on the environment, endangered species, and family planning strategies. Special features engage the attention of the young reader: 1) Case studies feature children in Brazil, China, India, Hungary, and the United States; 2) "What if?" examples ask children to imagine themselves in a situation; and 3) A list of actions that children can carry out to conserve the earth's resources and provide a sense of involvement. Text includes a list of population organizations, glossary, and index.

Population: Too Many People?, by David E. Newton. Hillside, New Jersey: Enslow Publishers, 1992. 128 pages. $18.95 hardbound. ISBN 0-89490-295-4

This text from the *Issues in Focus* series, designed for young people ages 12 and up, challenges young people to do some critical thinking about the concept of "overpopulation." Basic background includes: an outline of historical population growth; an update of current World and United States trends; an entertaining introduction to the demographic equation; and an overview of the demographic transition. Fuel for debate follows in chapters featuring "pessimistic" and "optimistic" viewpoints. Malthusian and Neo-Malthusian theories featuring Hardin, Malthus, Ehrlich, and Boulding are followed by the anti-Malthusian viewpoints of Simon and Wattenberg. This book allows students to examine the complex nature of population growth and its implications without giving them the answers.

The Peopling of Planet Earth: Human Population Growth Through the Ages, by Roy A. Gallant. New York, NY: Macmillan Publishing Company, 1990. 163 pages. $15.95 hardbound. ISBN 0-02-735772-4.

This book examines the history of population growth since the emergence of humans. The author shows the relationships of geologic and technological changes to human migration and distribution patterns as he guides the reader through Africa, Asia, Oceania, Europe, and the Americas. The text covers supernatural and scientific accounts of human origins, population dynamics, environmental concerns, resource use, and the quality of life. Includes glossary, bibliography, and many maps.

Audiovisual Programs

A Popular Little Planet, by 3-2-1 Contact, 1992. Shown on PBS as a **3-2-1 Contact Extra**. 27 minutes, elementary to middle school. $26.84 (includes postage). Call 1-800-321-7511.

This engaging, informative production introduces population and environmental issues. It helps students understand millions, billions, and exponential growth with examples using manipulatives such as pennies and ping pong balls. The program also explores the relationship between population growth and environmental problems.

Note: Teachers may videotape 3-2-1 Contact programs as they are aired for in-school classroom use, as long as the tapes are erased within three years. Check your local PBS listings for exact broadcast times.

World Population, by Zero Population Growth, 1990. ZPG, 1400 16th Street, N.W., Suite 320, Washington, D.C. 20036. (202) 332-2200. Six minutes, elementary to adult audiences, $32.95 (includes postage).

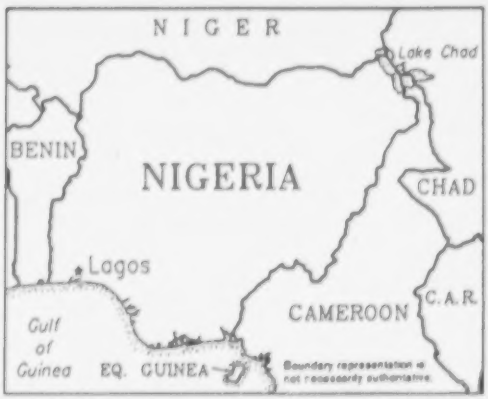
This revised version of a 1972 classic film presents the best-ever graphic simulation of human population growth. In this video, dots are placed on a world map to represent millions of people added to the population from A.D. 1 to the present and projected to 2050. Historic references have been added to this edition to place population changes in context.

Population and People of Faith: It's About Time, by Institute for Development Training, 1991. P.O. Box 2522, Chapel Hill, NC 27515-2522. 27 minutes, teenagers-adults. $29.95 (includes shipping). Call (919) 967-0563.

Designed for church or religious school presentations, *Population and People of Faith* challenges viewers to work through their churches to address global population issues. The visually appealing video provides background information on population growth and its relationship to the world's social, economic, and environmental problems, focusing on the role and status of women in this equation. It highlights programs that increase women's access to health care, family planning, education, and employment. A bronze medal winner for 1991 from the International Film and TV Festival of New York, it presents a multi-cultural spectrum of population experts, ecologists, and church leaders.

Nigeria

Population (1992 est.): 90.1 million
Total area: 356,670 sq. miles
Population density: 253 per sq. mi.
Births per 1,000 pop.: 46
Deaths per 1,000 pop.: 16
Rate of natural increase: 3.0 percent
Infant mortality rate: 114 infant deaths per1,000 live births
Life expectancy: 48 male; 49 female
Capital: Abuja (administrative)
Lagos (financial)



by Alex de Sherbinin

Located on the Gulf of Guinea—the cleft in Africa where the Niger River empties into the Atlantic—Nigeria's historically high population densities fostered numerous pre-colonial kingdoms. The highest concentrations of population are in the intensively cultivated southern rainforests and around the Niger River delta.

Over half of Nigeria's labor force is in the agricultural sector. From colonial times to the 1960s, the country's export economy was based on commercial crops. Now the economic mainstay is oil, which accounts for 97 percent of export earnings, or approximately $13 billion per year.

When oil prices rose from $2 to $34 per barrel during the 1970s, Nigeria experienced an unprecedented economic boom. When oil prices fell in the mid-1980s, the country found itself saddled with a crippling external debt—$35 billion in 1991,the highest in sub-Saharan Africa. Today, Nigeria is experiencing another type of boom, this one related to the highly profitable international narcotics trade.

Most of the country's industry is located in Lagos, a bustling and chaotic city of 5 million people. In an effort to escape the crime and congestion of Lagos, government offices are being relocated to the new capital of Abuja in the geographical center of Nigeria.

Seldom has a census attracted as much attention as did Nigeria's 1991 census, which came in 30 million lower than official estimates (see *PT*, June 1992). Factors that entered into the inflated estimates include uncertainties surrounding birth and death rates from the 1960s through the 1980s and the lack of reliable censuses. Nevertheless, the results are causing some officials to call for the diversion of resources from population programs to other "more pressing" socioeconomic problems—this despite a rapid population growth rate of 3 percent.

The government's 1986 population policy established an ambitious target of four births per woman by the year 2000, about two births less than Nigeria's current TFR (total fertility rate, or average lifetime births per woman) of 6.5. However, when asked how many children they considered ideal, 61 percent of all women said that family size was "up to God." The average for those who provided a number was 5.8. The use of modern contraceptives remains extremely low at 3.5 percent of married women, although from 1981 to 1990 knowledge of modern contraceptives among married women went from 22 to 44 percent.

Ethnic tensions continue, though not on the same scale as the bloody successionist war of the area called "Biafra" in the late 1960s, which claimed one-half million to 2 million lives. In January of this year, 2,000 people died in land conflicts in northeastern Nigeria, and ethnic and religious clashes were reported in the northern state of Kaduna this May. The 1991 census scrupulously avoided collecting politically sensitive statistics on religion and ethnicity.

Long-awaited presidential elections are scheduled for the fall of 1992, which could end almost a decade of military rule. However, any transition is likely to be difficult.

POPULATION REFERENCE BUREAU, INC.
1875 Connecticut Ave., N.W., Suite 520
Washington, D.C. 20009-5728